



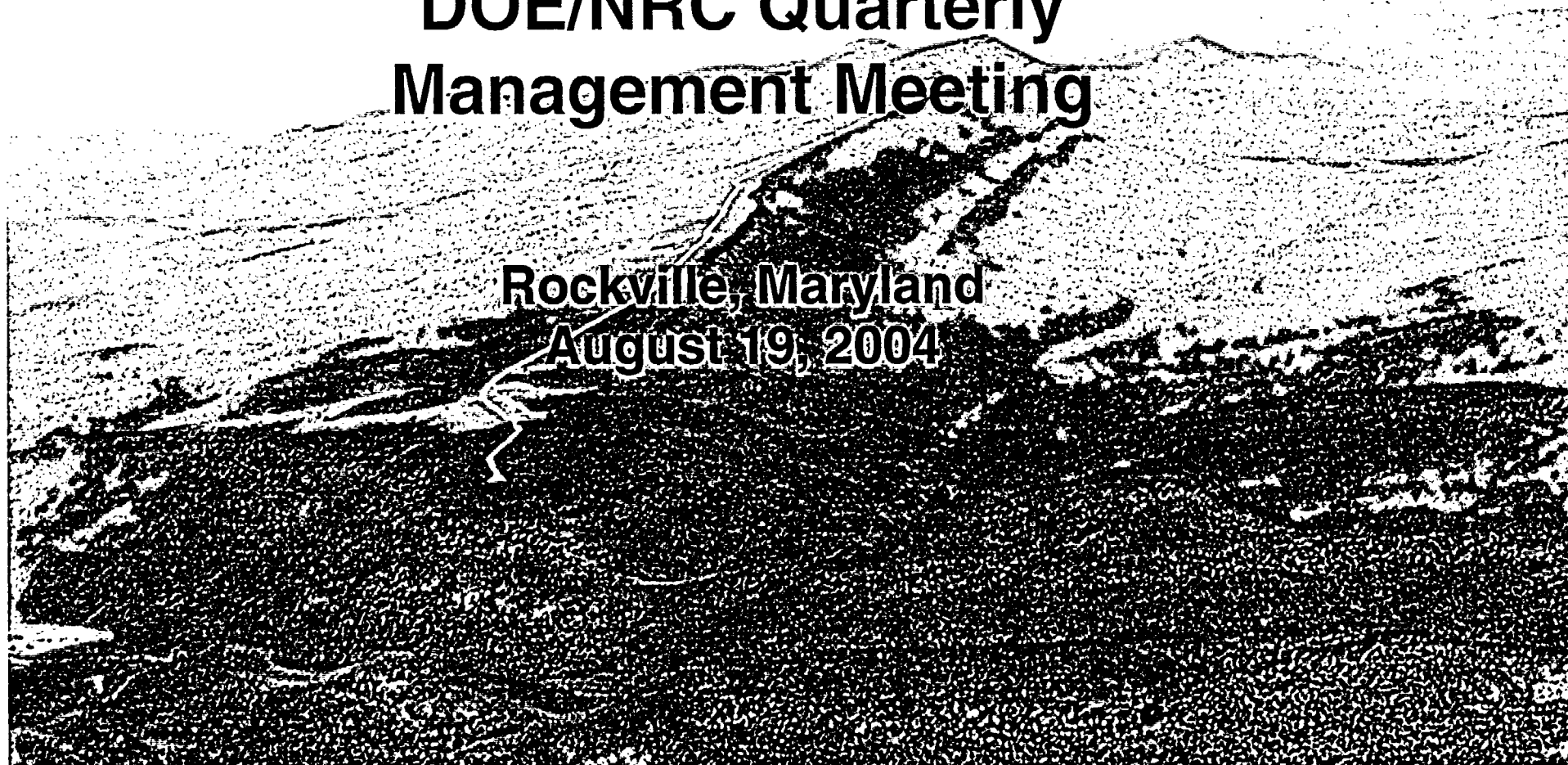
U.S. Department of Energy  
Office of Civilian Radioactive Waste Management



[www.ocrwm.doe.gov](http://www.ocrwm.doe.gov)

# DOE/NRC Quarterly Management Meeting

Rockville, Maryland  
August 19, 2004



**Agenda**  
**DOE/NRC Quarterly Management Meeting**  
**August 19, 2004**  
**10:00 AM– 3:45 PM (ET)**  
**7:00 AM – 12:45 PM (PT)**

**U. S. Nuclear Regulatory Commission**  
**Two White Flint North, Auditorium**  
**11545 Rockville Pike**  
**Rockville, MD**

*And via Videoconference to:*

**BSC**  
**Room 915**  
**9960 Covington Cross**  
**Las Vegas, Nevada**

**CNWRA**  
**Bldg. 189, Conference Room B232**  
**6220 Culebra Road**  
**San Antonio, TX**

*INTERESTED PARTIES MAY PARTICIPATE VIA TELECON BY CALLING 1-800-638-8081 or  
301-231-5539, Passcode 8918#*

<b>10:00 AM</b>	<b>Opening Remarks</b>	<b>NRC/DOE</b>
<b>10:15 AM</b>	<b>NRC Program Update</b>	<b>NRC</b>
<b>10:35 AM</b>	<b>DOE Program Update</b>	<b>Dr. Chu</b>
<b>11:00 AM</b>	<b>Yucca Mountain Project Update</b>	<b>Arthur/Mitchell</b>
<b>12:30 PM</b>	<b>Lunch</b>	<b>All</b>
<b>1:30 PM</b>	<b>License Application Status</b>	<b>Ziegler</b>
<b>2:00 PM</b>	<b>QA Program Update</b>	<b>Brown</b>
<b>2:30 PM</b>	<b>Break/Caucus</b>	<b>All</b>
<b>3:00 PM</b>	<b>Action Item Status</b>	<b>Gunter</b>
<b>3:15 PM</b>	<b>Public Comments</b>	<b>All</b>
<b>3:30 PM</b>	<b>Closing Remarks</b>	<b>All</b>
<b>3:45 PM</b>	<b>Adjourn</b>	



U.S. Department of Energy  
Office of Civilian Radioactive Waste Management



# Project Update

Presented to:  
**DOE/NRC Quarterly Management Meeting**

Presented by:  
**W. John Arthur, III**  
**Deputy Director, Office of Repository Development**  
**Office of Repository Development**  
**U.S. Department of Energy**

**August 19, 2004**  
**Rockville, Maryland**

# Progress Towards License Application

<u>COMPONENT</u>	<u>% COMPLETE (April Data)</u>	<u>% COMPLETE (June Data)</u>
KTI Agreements Addressed*	70%	85%
LA Document	33%	59%
Preclosure Safety Assessment	62%	99%
TSPA-LA	81%	81%**
Design	<u>79%</u>	<u>83%</u>
<b>TOTAL WEIGHTED % COMPLETE</b>	<b>68%</b>	<b>79%</b>

\* Status reflected as % of 293 agreements addressed by DOE

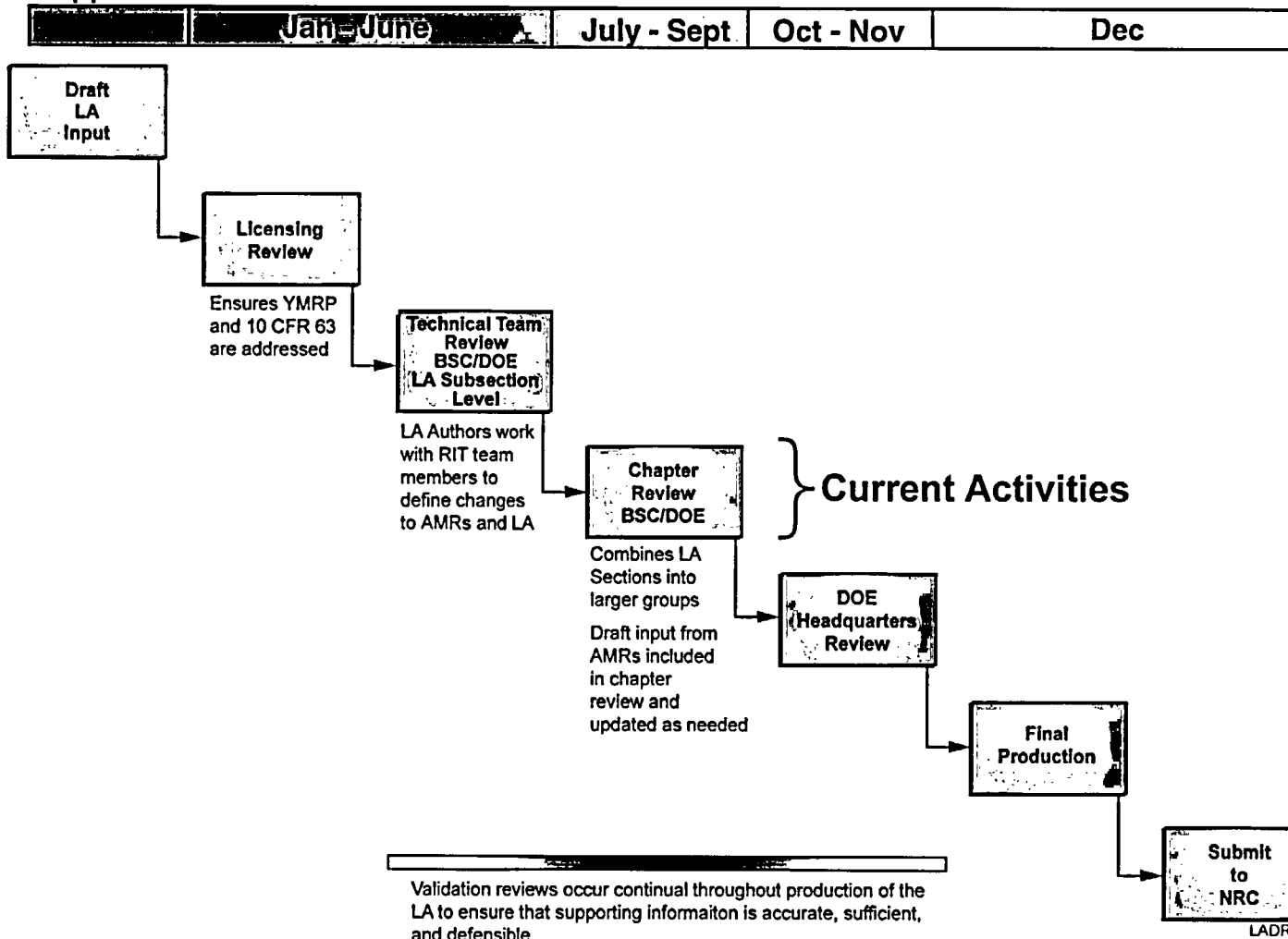
\*\* This value will be held at the current value through September pending completion of the Analysis Model Report/Regulatory Integration Team (AMR/RIT) activity and the Total System Performance Assessment-License Application (TSPA-LA) document





# License Application Development and Review Process

## Approximate Schedule



# Industry Benchmarking

- Office of Repository Development (ORD) meets on a quarterly basis with industry leaders to discuss best practices and lessons learned
- Discussions include Quality Assurance, Corrective Action Program, Safety Conscious Work Environment, Industry License Validation Process, and other areas of interest
- ORD management is evaluating the value of cross-training assignments for federal personnel to other nuclear facilities



# Office of Repository Development Licensee Transition Team

- Commissioned to develop a transition plan that defines the goals, actions, milestones, and responsibilities for a successful transition to the NRC-regulated Applicant/Licensee environment
- Will report to the Associate Deputy Director, chaired by Richard Spence
- Final transition plan by September 15, 2004
- Some areas of responsibility are:
  - Define key attributes of a successful NRC Applicant/Licensee
  - Define Applicant/Licensee best practices, processes and systems for each project phase
  - Determine current state and perform gap analysis
  - Define action plans and time frame to implement transition
    - ♦ Organization alignment
    - ♦ Core management processes
    - ♦ Training/Qualifications
    - ♦ Inspection readiness

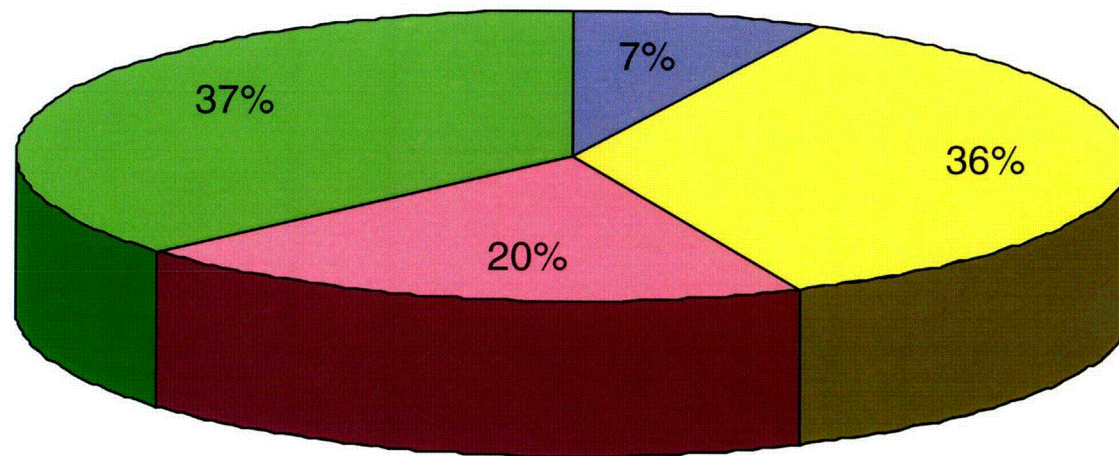


# Key Phases of Regulatory Integration Team Process

February	March	April	May	June	July	August	September
Mobilization							
Organization							
Technical Work Plans							
TSPA Architecture							
Data Trees							
Office Moves							
		Phase 1					
		Document Evaluations (114)					
		Evaluations Using Checklists					
		Consolidation of Action Items					
		Integration Review					
		Management Review					
				Phase 2			
		Document Production (90)					
			Preparation of Draft				
			Checking				
			AP-2.14 Review				
			Approval				



# Regulatory Integration Team Evaluation Phase Types of Action Items

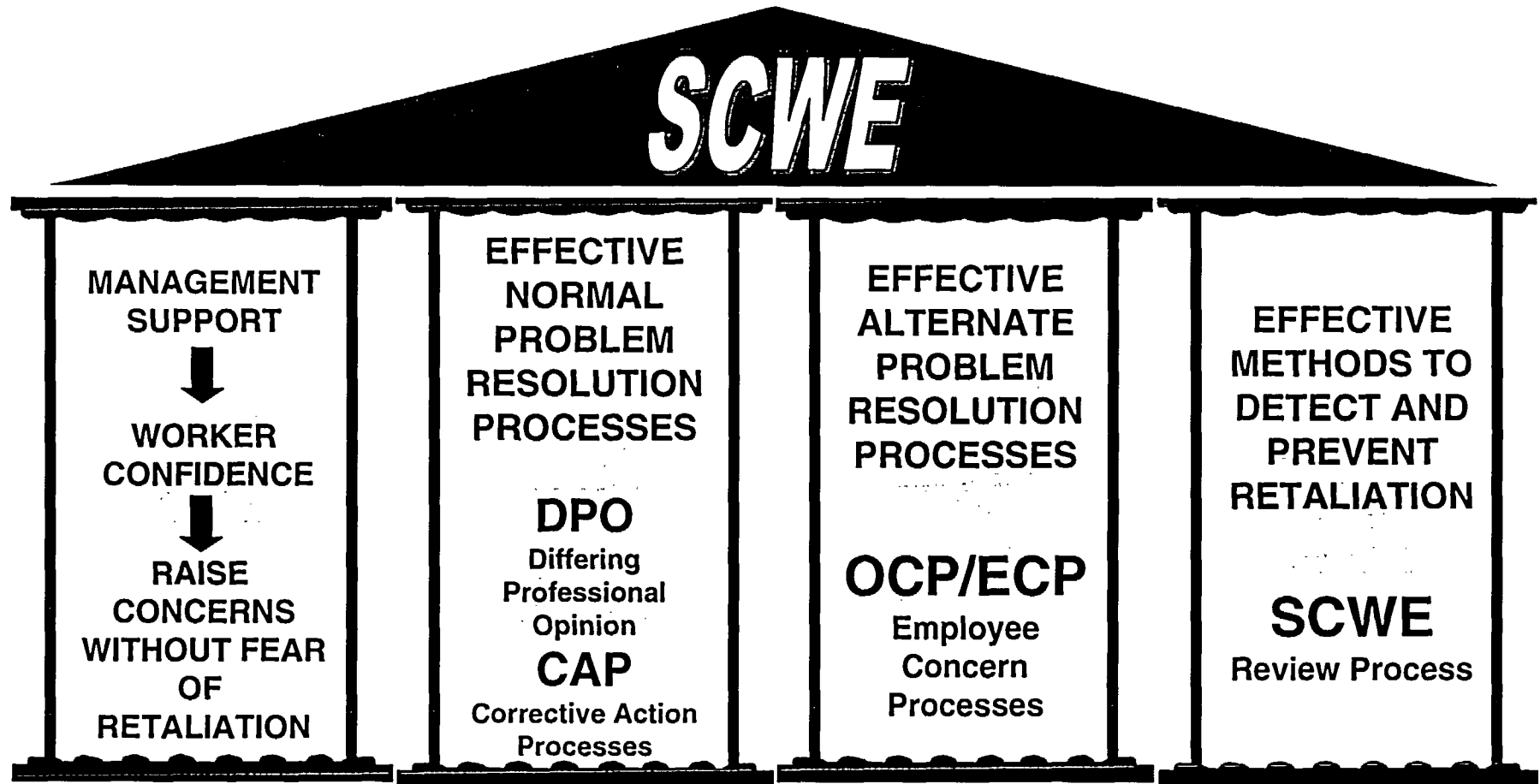


Approximately 3,500  
Total Action Items

■ *Technical*   ■ *Insufficient Justification*   ■ *Procedural*   ■ *Style/Clarity/Documentation*



# FOUR PILLARS OF A SAFETY CONSCIOUS WORK ENVIRONMENT



**YUCCA  
MOUNTAIN**

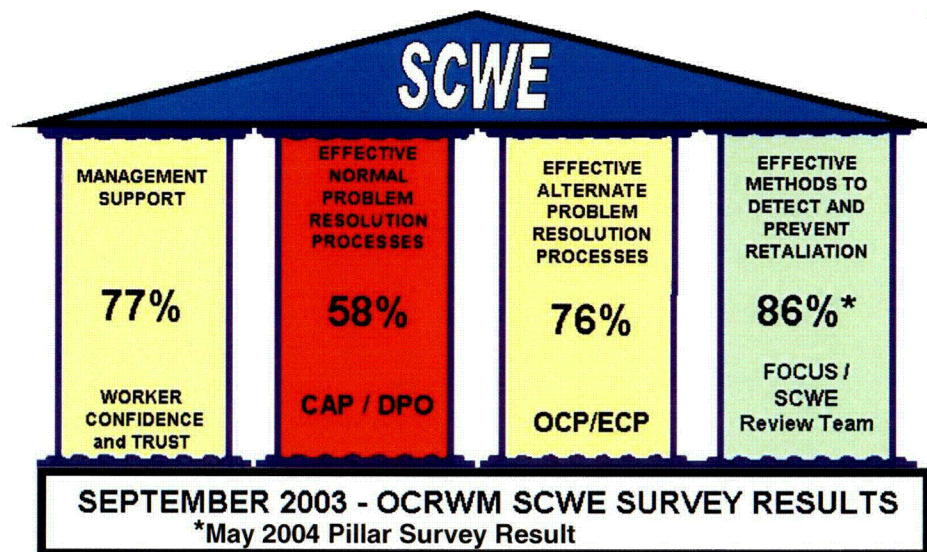
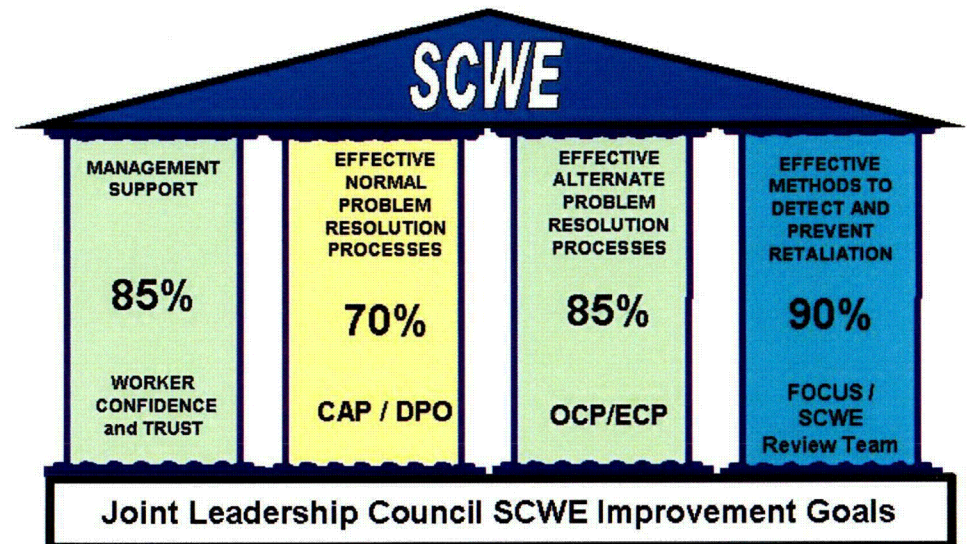
## BASIC PRINCIPLES

- Treat everyone with respect
  - Seek first to understand
- Focus on the situation, not the person
- Take initiative to make things better
  - Lead by example





# Safety Conscious Work Environment Improving Performance Goals



# Status of NRC 30-Day Letter Actions

1. (Ziegler): Submit LA that complies with 10 CFR Part 63 in which data, software, and models meet or exceed applicable quality assurance requirements - December 2004
- √ 2. (Ziegler): Present KTI approach to NRC - June 30, 2003 (closed on time)
- √ 3. (Brown): Create an effective trend report to monitor procedural compliance, identify causes of non-compliance, and take corrective action as necessary - Sep 30, 2003 (closed March 30, 2004)
- √ 4. (Van der Puy): Update AP5.1Q to streamline the review and revision process for procedures – July 30, 2003 (closed on time)
- √ 5. (Van der Puy): Screen procedures for needed improvement - July 30, 2003 (closed December 31, 2003)
- √ 6. (Brown): Single improved Corrective Action Plan implemented - Sep 30, 2003 (closed on time)
7. (Brown): Goal: Approve 90% of corrective actions within 30 days of initiation of DRs and CARs; complete the corrective action for DRs in fewer than 60 days on average; complete corrective action for CARs in fewer than 100 days on average - TBD
- √ 8. (Van Der Puy): SCWE surveys will be performed quarterly with results provided to NRC – July 17, 2003 (closed on time)
- ➡ √ 9. (Van Der Puy): Additional SCWE training to managers for increased effectiveness – July 7, 2004
- √ 10. (Van Der Puy): Conduct external expert annual SCWE surveys -September 19, 2003 (closed on time)
- √ 11. (Mellington): Performance criteria for quality, timeliness, procedural compliance, and safety built into the appraisals and evaluations - September 1 2003 (closed September 30, 2003)
- √ 12. (Mellington): Demonstrated actions that exceed these expectations will be recognized and failure to meet them will be addressed appropriately - October 1, 2003 (closed on time)
- √ 13. (Mellington): Semiannual report to employees to highlight successes, communicate lessons learned, and underscore our commitment to accountability - October 1, 2003 (1st report issued October 15, 2003)



= Recent closures





# Quality Assurance Program

## Where we were April 03

## Actions

## Current/Future

Audits and surveillances effective in identifying issues



- Continue to improve audit focus and performance
- Integrating audit and surveillance scheduling with scheduling of other project assessments



Continue to improve audit focus and performance

Continue integrating QA audit and surveillance scheduling with scheduling of other project assessments

QARD did not implement 10 CFR 63



- Revised QARD

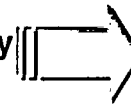


The QA program description will implement 10 CFR 63

Ownership for quality not embraced by line organization

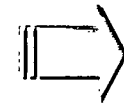


- Transitioning ownership for quality to line organizations, e.g. CAP



Ownership for quality transitioning to line organizations

DOE OQA Organization not aligned to support line organizations



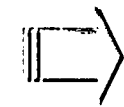
- Develop DOE OQA Quality Engineer function



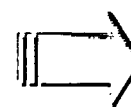
Continue to develop DOE OQA Quality Engineer function to support line organizations in implementing QA program

Significant CAQs identified with products critical to License Application

- Data
- Models
- Software



- Perform Root Cause Analyses
- Revised procedures
- Trained personnel
- Increased QA oversight
- Implementing Regulatory Integration Team



Issue critical to a quality License Application identified and being corrected

Corrective actions complete for significant CAQs for data, models, and software



# July 2004 MOR Annunciator Panel

Yucca Mountain Project Annunciator Panel  
Performance Indicators based on data for: June 2004

	Primary					Secondary					Focus Areas				
	Y Y G G	Y Y Y G	G G G G	R Y Y Y	G G G G	Y Y G G	G G G G	Y Y G G	G G G G	Y Y G G	G G G G	G G G G	G G G G	G G G G	G G G G
Work Execution	1.1 Licensing	1.1.1 License Application Development	1.1.2 NRC Interactions	1.1.3 License Support Network Input	1.1.4 NRC Commitments	1.1.5 Key Technical Issues					FA1 Safeguards				
	1.2 Engineering/Design	1.2.1 Surface Facilities	1.2.2 Subsurface Facilities	1.2.3 Engineered Barriers	1.2.4 Regts & Integration Management						FA2 Regulatory Integration Team (RIT)				
	1.3 Safety Analysis	1.3.1 TSPA	1.3.2 Performance Confirmation	1.3.3 Preclosure Safety Analysis	1.3.4 Software Qualification										
	1.4 Site Operations	1.4.2 Site Construction	1.4.3 Site Maintenance	1.4.4 Operations	1.4.5 Bechtel Nevada	1.4.6 Site Critical Systems									
Management	2.1 Project Support														
	2.2 Safety, Health, and the Environment	2.2.1 Incidents	2.2.2 ES&H Program Awareness	2.2.3 ES&H Reporting											
	2.3 Quality Assurance	2.3.1 Product Quality	2.3.2 Process Quality	2.3.3 Vendor Quality	2.3.4 Corrective Action Program Quality	2.3.5 Quality Systems									
	2.4 Corrective Action Mgmt System	2.4.1 CAP Effectiveness	2.4.2 Self Reporting Culture	2.4.3 Timely Analysis & Plan Development	2.4.4 Timely CA Resolution										
	2.5 Management Framework	2.5.1 Procedures	2.5.2 Requirements Management	2.5.3 Lessons Learned Program	2.5.4 Integrated Assessment Program										
	2.7 Project Management	2.7.1 Cost Performance (Overall CPI)	2.7.2 Schedule Performance (Overall SPI)	2.7.3 Scope Baseline	2.7.4 Risk & Contingency	2.7.5 Key Deliverable Critical Path Float									
	2.8 Organizational Climate	2.8.1 Employee Concerns	2.8.2 Safety Culture	2.8.3 SCWE	2.8.5 Internal Comm.										
	3.1 External	3.1.2 External Comm.	3.1.5 Funding												
	4.1 Human Performance	4.1.1 Error Prevention	4.1.2 Human Performance Awareness	4.1.3 Error Correction	4.1.4 Learning Culture										

Note: Reflects the end of June data.

## Key

History	↑ trend
Metric Title	
↓ Late indicators	
* Indicates a change to metric this month.	

B G Y R	

A lettered history tile with a white background indicates the point at which a change occurred in the underlying metrics. The performance reported in the history tiles to the left of the point of change should be used with caution. A change is defined as a change to the metric definition, threshold, weighting, calculation, data source(s) used in the calculation, or the deletion/addition of a sub-metric. Trend indicators are based on a rolling average of six months of data. If there are not six data points because the metric is new or has been changed, then the trend is based upon the data available, or is indicated as neutral.

**B** Exceptional performance that exceeds all requirements and expectations for the desired outcome, maintained for more than six months.

**R** Degraded or adverse performance warranting significant level of management attention, resources, and improvement.

**G** Good performance which meets or exceeds requirements and expectations. The status code "B > G" indicates that the score would be Blue, but has not demonstrated sustained performance.

**L** Gray for Late - Updated metric not provided by due date.

**D** Approved metric not yet reporting data.

**Y** Yellow is used to denote: Performance which warrants increased management attention and resources to achieve desired results or to reverse a negative trend.

**V** Acceptable performance that relies on a set of conditions which could change and send performance into the "Red".

**V** Insufficient data or metric definition is not yet approved.





U.S. Department of Energy  
Office of Civilian Radioactive Waste Management



# License Application Status

Presented to:

**DOE/NRC Quarterly Management Meeting**

Presented by:

**Joseph D. Ziegler**

**Director, Office of License Application and Strategy**

**Office of Repository Development**

**U.S. Department of Energy**

**August 19, 2004**

**Rockville, Maryland**

# Topics for Discussion

- **Progress Towards License Application (LA)**
  - Data, software, models
- **Key Technical Issues (KTI) Agreement Status**
- **Recent and Near-term Interactions**
- **Summary**



# Progress Towards License Application

<u>COMPONENT</u>	<u>% COMPLETE (April Data)</u>	<u>% COMPLETE (June Data)</u>
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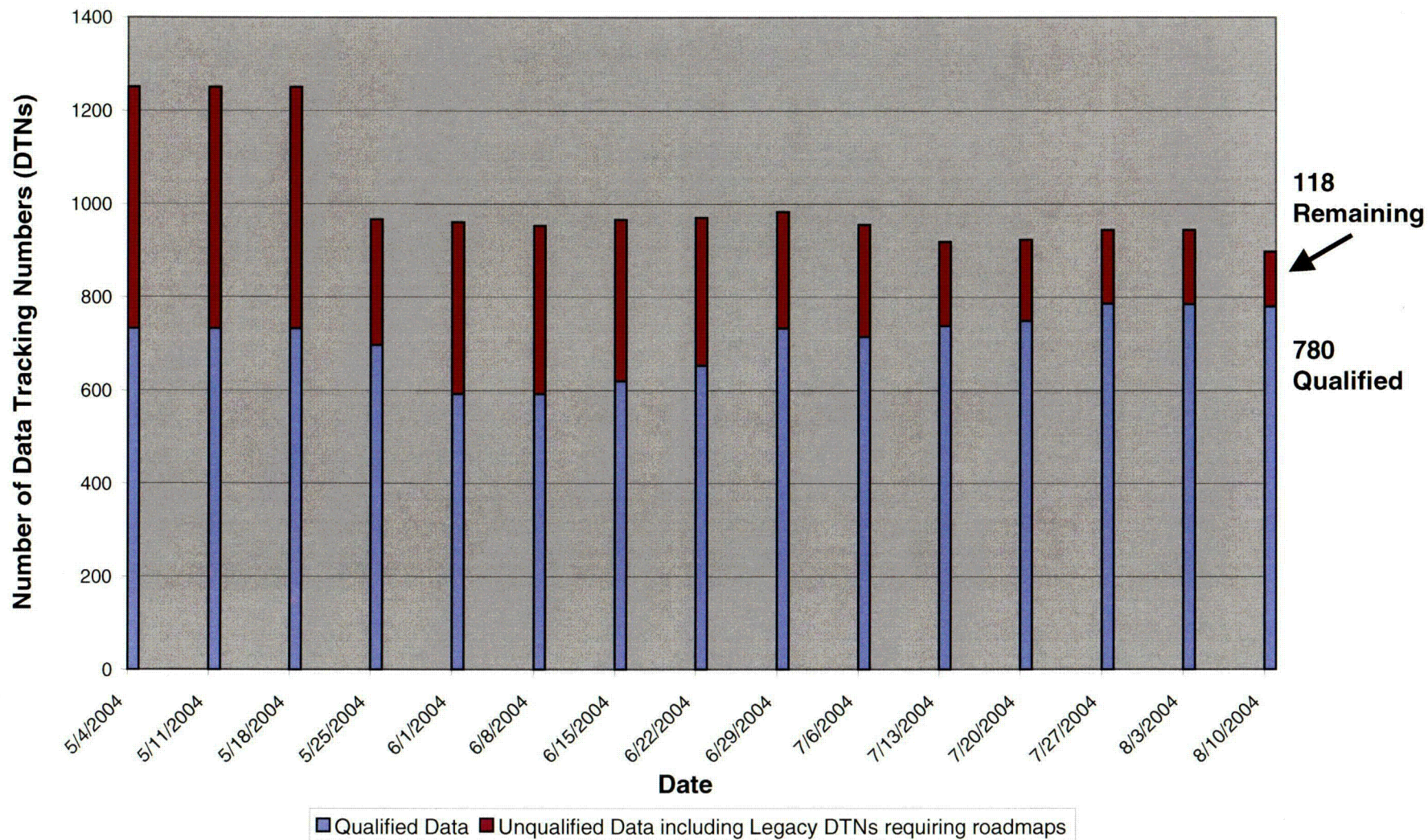
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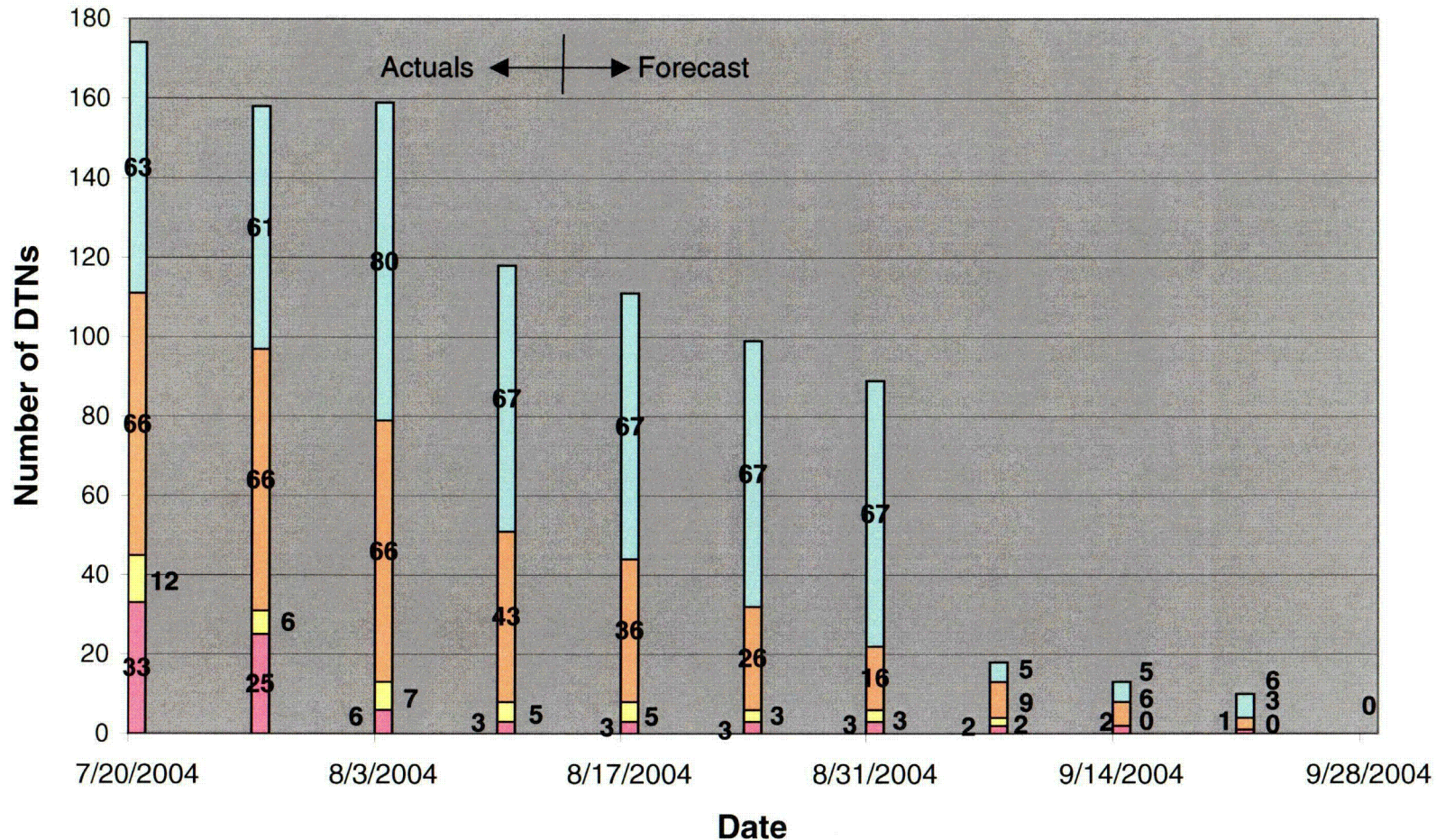
# Data Qualification Status

(as of August 10)





# Data Qualification Progress/Projection



■ Projected DTNs to be qualified in AMR  
■ Projected Legacy Data Roadmaps to go

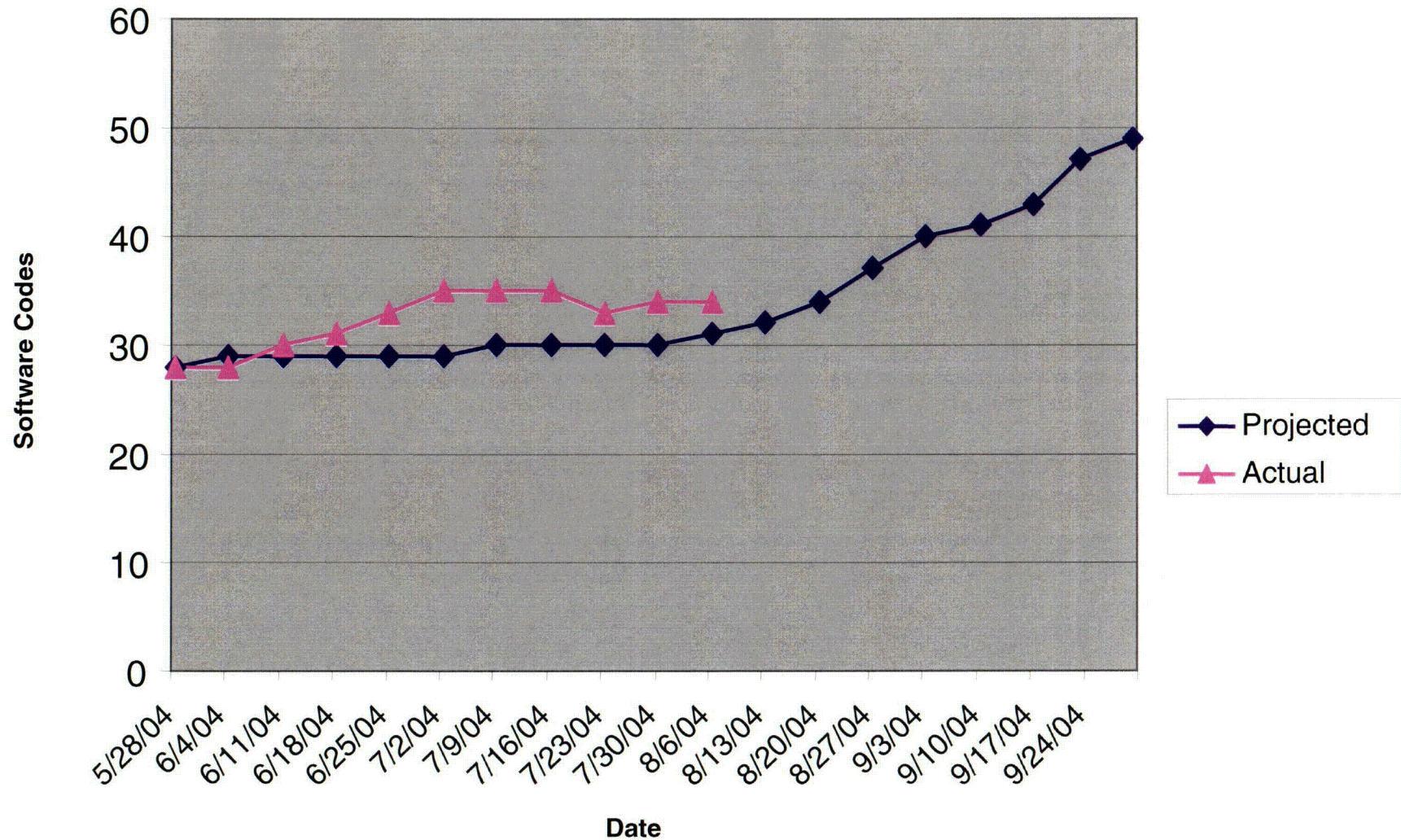
■ Projected DTNs to be qualified outside AMR  
■ Projected DTNs qualified in Draft AMRs





# Software Qualification Work Off Curve

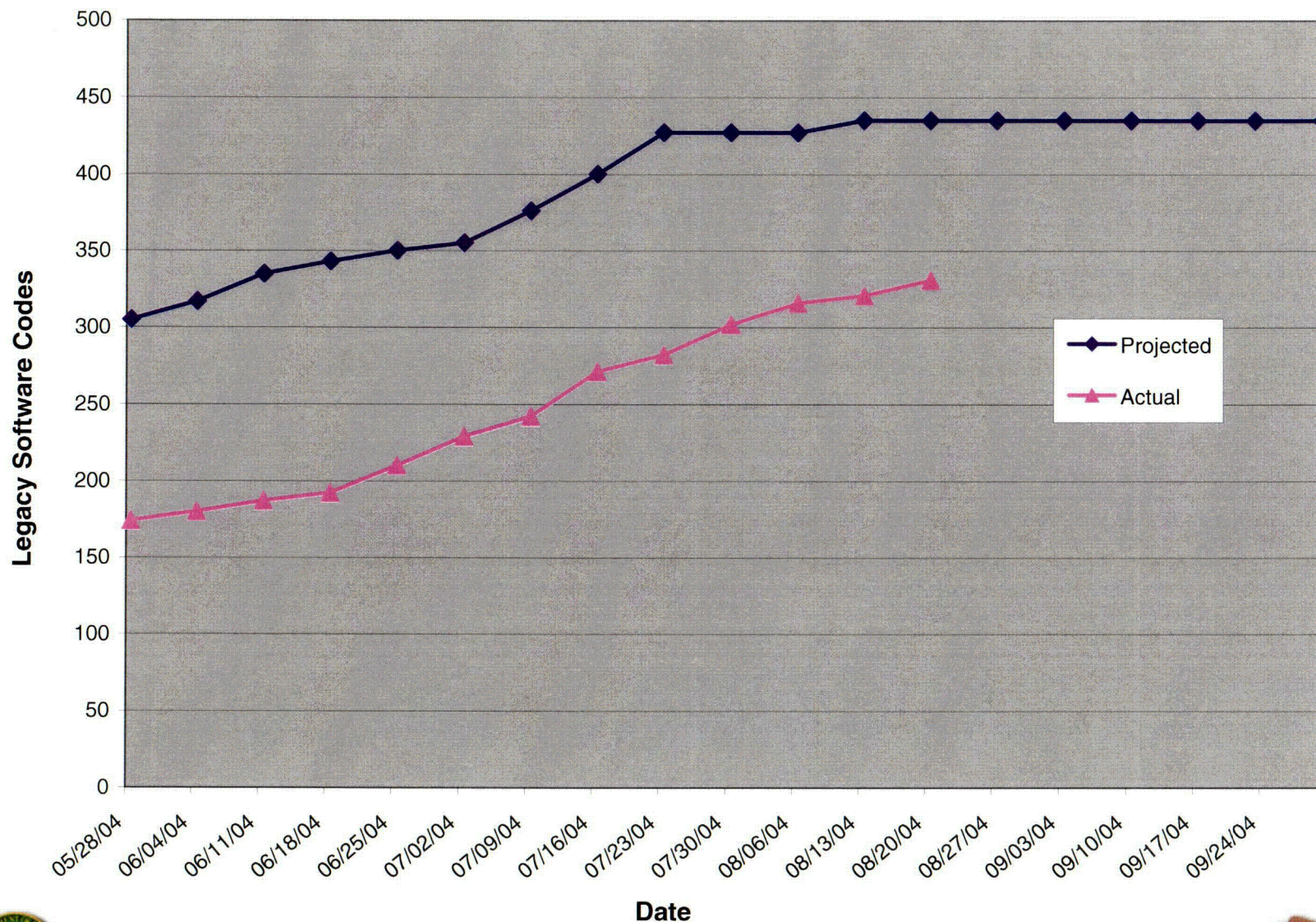
(as of August 10, 2004)





# Verification Testing of Legacy Software

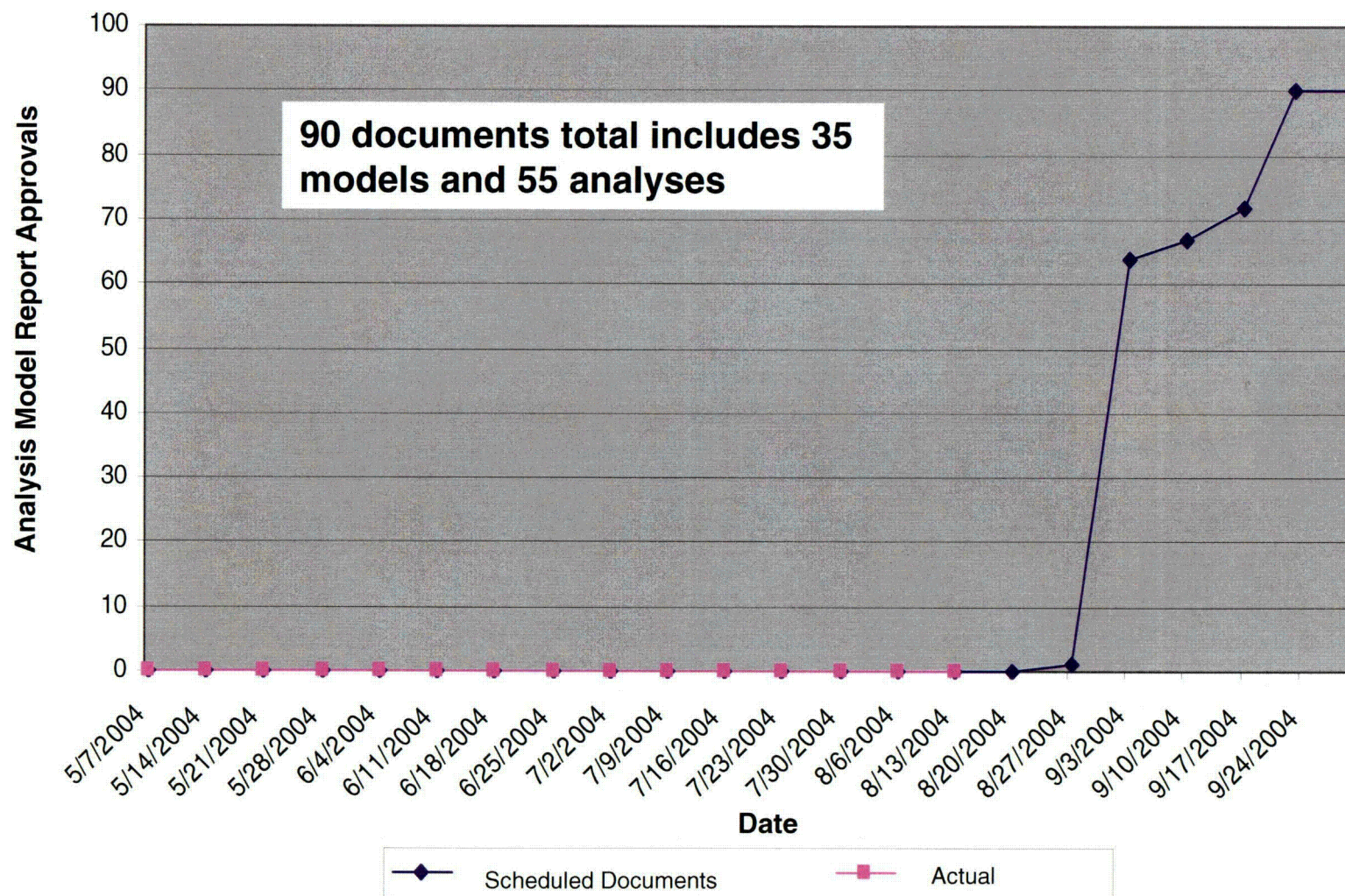
(as of August 10, 2004)





# Regulatory Integration Team/Analysis Model Report Approvals

(as of August 10, 2004)



# Key Technical Issue Agreement Status

- 281 of 293 agreement responses submitted as of August 11, 2004
- Remainder of the agreement responses scheduled to be addressed by August 31
- Approach to transition Key Technical Issue (KTI) agreement process into the licensing process



# Key Technical Issue Agreements

## Status Summary

(as of August 11, 2004)

KTI ID	Agreements Reached	Agreements Submitted to NRC	Responses Submitted In NRC Review	Partial Responses Submitted	NRC Needs Additional Information	Responses Remaining to be Submitted	Agreements Complete
CLST	58	57	35	2	0	1	20
ENFE	41	40	22	1	1	1	16
GEN	1	1	0	1	0	0	0
IA	22	22	7	0	1 *	0	14
PRE	9	9	4	0	2 *	0	3
RDTME	23	23	22	0	0	0	1
RT	29	29	22	1	0	0	6
SDS	10	10	5	0	0	0	5
TEF	15	14	7	0	0	1	7
TSPAI	58	49	27	2	4	9	16
USFIC	27	27	9	0	0	0	18
<b>TOTAL =</b>	<b>293</b>	<b>281</b>	<b>160</b>	<b>7</b>	<b>8 *</b>	<b>12</b>	<b>106</b>

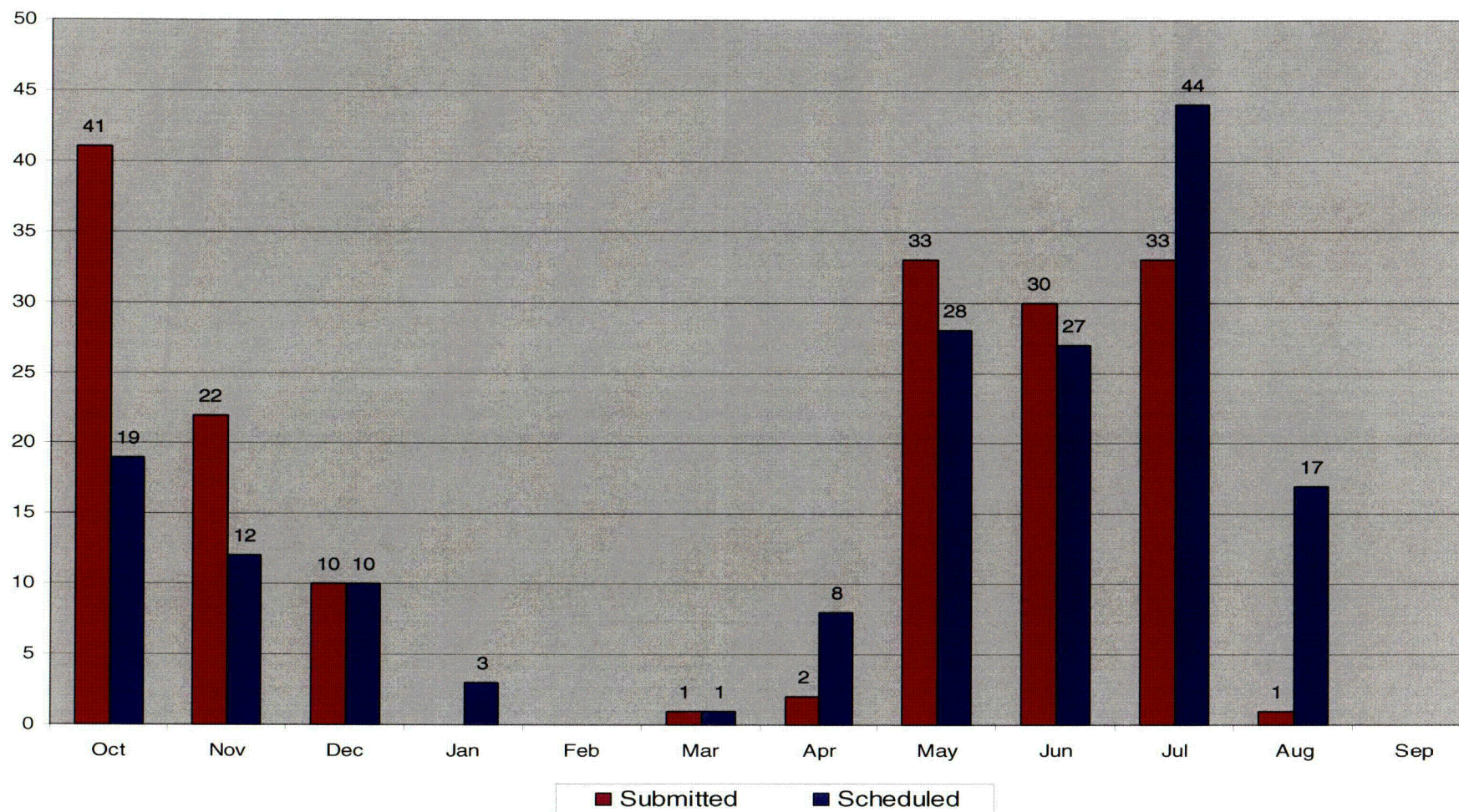
*\*Total responses to be submitted to NRC by the end of August (remaining responses, partial responses and AIN's) = 25 and does not include PRE.7.04 AIN (to be addressed in the LA) and the recently received IA 2.11 AIN (being evaluated by DOE)*





# Submitted vs Scheduled

(as of August 11, 2004)

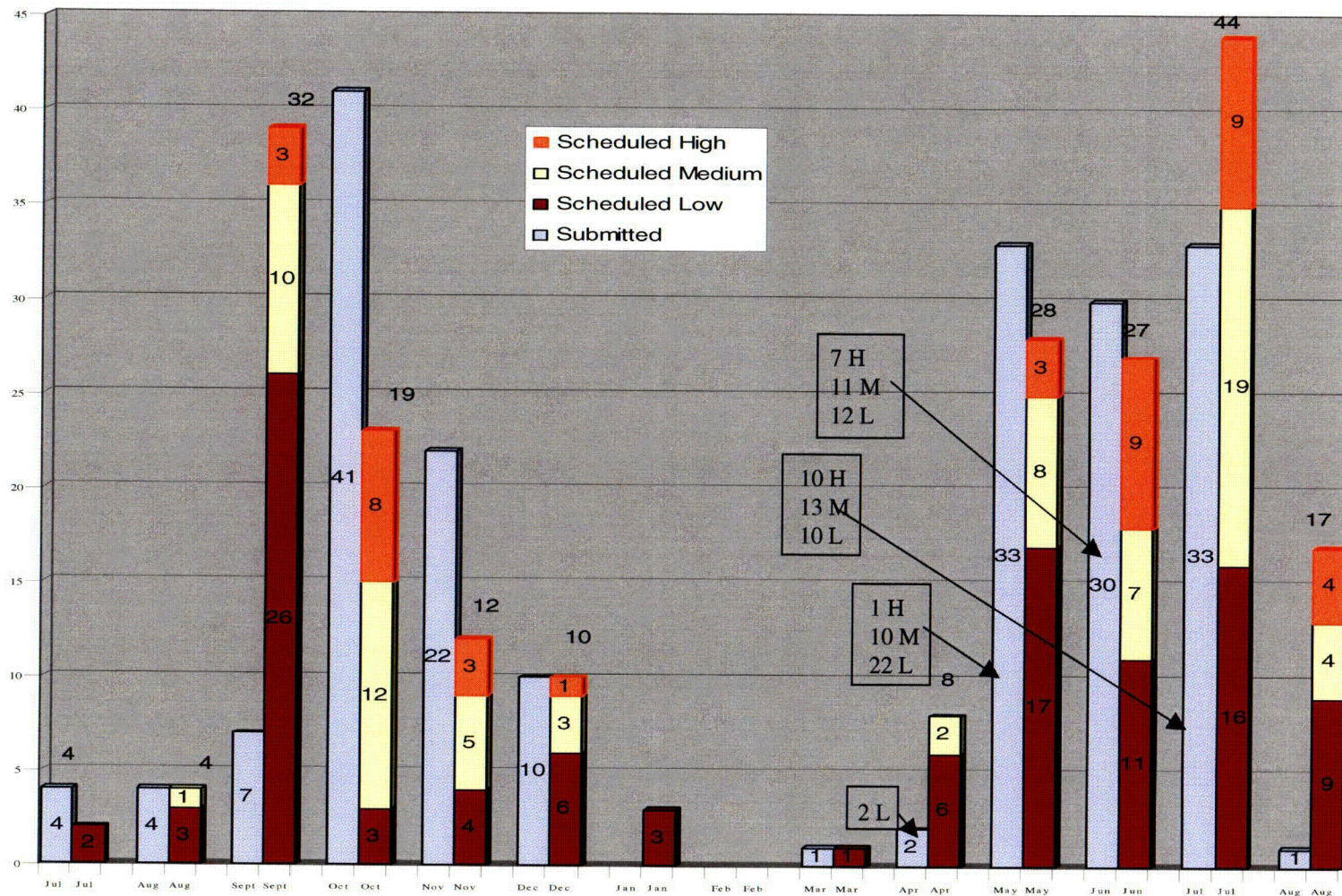


Based on April 2, 2004 DOE schedule. Does not include PRE 7.04 AIN (To be addressed in the LA) or IA 2.11 AIN (Recently received and being evaluated by DOE).





# Key Technical Issue Agreements Risk Rank Schedule (as of August 11, 2004)



# Recent Interactions

- **May 03: Technical Exchange - Performance Indicators**
- **May 04: Quarterly Quality Assurance Meeting**
- **May 05: Technical Exchange - NRC Technical Evaluation of DOE Analysis Model Reports, Process Controls and Corrective Actions**
- **May 11: Quarterly Management Meeting**
- **May 12: Technical Exchange - Items Important to Safety**



# Near-Term Interactions

- **Scheduled upcoming interactions:**
  - **Surface Facility Design and Preclosure Safety Assessment-LA/ High Level Decision Schedule** **September 14-15**
  - **Igneous Aeromagnetic Survey Results** **September 21**
  - **Quality Assurance Requirements and Description** **September 29**
  - **TSPA-LA** **October TBD**
  - **Management Meeting** **November 17 (tentative)**





# Summary

- **On target to submit the LA in December 2004**
- **On schedule to submit remaining KTI Agreement responses by August 31, 2004**
- **Any additional NRC questions on KTI Agreement responses after July 23, 2004 will be resolved through the licensing process**
- **Future interactions prior to submittal of the LA should focus on clarification of issues**





U.S. Department of Energy  
Office of Civilian Radioactive Waste Management



[www.ocrwm.doe.gov](http://www.ocrwm.doe.gov)

# Quality Assurance Program Update

Presented to:

**DOE/NRC Quarterly Management Meeting**

Presented by:

**R. Dennis Brown**

**Director, Office of Quality Assurance**

**Office of Civilian Radioactive Waste Management**

**U.S. Department of Energy**

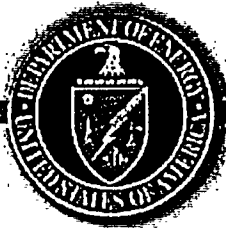
**August 19, 2004**

**Rockville, Maryland**

# Quality Assurance Program Update

- **Models**
- **Corrective Action Program**
- **Audit Results**
- **Internal OQA Audit Results**
- **Organizational Change**
- **Quality Assurance Management Policy (QAMP)**
- **QARD Status and Issues**
- **Strategic Planning**





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# Quality Assurance Program Update

Presented to:

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Presented by:

R. Dennis Brown

Director, Office of Quality Assurance

Office of Civilian Radioactive Waste Management

U.S. Department of Energy

August 19, 2004

Rockville, MD

# Quality Assurance Program Update

- Models
- Corrective Action Program
- Audit Results
- Internal OQA Audit Results
- Organizational Change
- Quality Assurance Management Policy (QAMP)
- QARD Status and Issues
- Strategic Planning



# Models

- **Quality Engineering monitoring**
- **QA Surveillances on RIT**
- **CAR-001 verification activities**



# **Corrective Action Program Transition Activities**

- **BSC QA reviewing 100% Level C's**
- **OQA reviewing 100% Level C's**
- **OQA observing selected BSC QA oversight activities**
- **OQA surveillance of CAP in late FY04**
- **OQA audit of CAP in early FY05**



# Audit/Surveillance Results

- **Corrective Action Program (CAP)**
- **Software QA**
- **TSPA**
- **Analysis Reports**
- **EM activities**





# Internal OQA Audit Results

- August 9-13, 2004
- Performed annually
- Three independent QA auditors
- OQA effectively implementing QA program
- One Level B Condition Report



# Organization Change

- OQA Director reports to Deputy Director, ORD for all 10CFR63 related activities
- OQA Director reports to Director, OCRWM for all other OCRWM related activities (transportation, science & technology, etc.)
- New OQA Auditor for EM audits



# Quality Assurance Management Policy

- Overall OCRWM QA Policy
  - QARD
  - AQAP
  - Other OCRWM QA Plans



# **QARD Status**

- **Revision 15 (10CFR60)**
- **Revision 16 (10CFR60)**
- **Next Revision (10CFR63)**
  - **NRC/DOE Technical Exchange**



# Strategic Planning

- New effort
- OQA support for LA review, design, construction, and operations
  - Skills mix/staffing
  - Training
  - Processes and Procedures

